	6 6 6		8 <u>8</u>
1: Dlarkson_24 + 11			
ა ი ა ა ა ა ა ა ა ა ა ა ა ა ა ა ა ა ა ა			
2: Beelzebub_27 + 1			
<u>ა</u> ე ა არი დი ა დი ა.			
B: Lilbit_24			
Y Y Y Y Y			
4: RedRaide ^r 77_24			
. ` ? ` ` `	. 6 6	1	৬ ৩
5: MosMoris_22 + 1			

Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 4288 Report

This analysis was run 04/28/24 on database version 559.

Pham number 4288 has 18 members, 2 are drafts.

Phages represented in each track:

Track 1 : Clarkson_24, Tesla_23, Poise_24, JoieB_24, Marvin_22, LittleLaf_23, VasuNzinga_22, Huphlepuff_25, Pringar_23, Blackbeetle_24, Corazon_22, Raela_24
Track 2 : Beelzebub_27, Caprice_20

- Track 3 : Lilbit_24
- Track 4 : RedRaider77_24
- Track 5 : MosMoris_22, Gattaca_23

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 5, it was called in 13 of the 16 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Blackbeetle_24, Clarkson_24, Corazon_22, Huphlepuff_25, JoieB_24, LittleLaf_23, Marvin_22, Poise_24, Pringar_23, Raela_24, RedRaider77_24, Tesla_23, VasuNzinga_22,

Genes that have the "Most Annotated" start but do not call it: • Beelzebub_27, Caprice_20, Gattaca_23, Lilbit_24, MosMoris_22,

Genes that do not have the "Most Annotated" start:

Summary by start number:

Start 3:

- Found in 18 of 18 (100.0%) of genes in pham
- Manual Annotations of this start: 1 of 16
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Beelzebub_27 (S), Caprice_20 (S),

Start 4:

- Found in 18 of 18 (100.0%) of genes in pham
- Manual Annotations of this start: 2 of 16

- Called 11.1% of time when present
- Phage (with cluster) where this start called: Gattaca_23 (S), MosMoris_22 (S),

Start 5:

- Found in 18 of 18 (100.0%) of genes in pham
- Manual Annotations of this start: 13 of 16
- Called 72.2% of time when present

• Phage (with cluster) where this start called: Blackbeetle_24 (S), Clarkson_24 (S), Corazon_22 (S), Huphlepuff_25 (S), JoieB_24 (S), LittleLaf_23 (S), Marvin_22 (S), Poise_24 (S), Pringar_23 (S), Raela_24 (S), RedRaider77_24 (S), Tesla_23 (S), VasuNzinga_22 (S),

Start 7:

- Found in 18 of 18 (100.0%) of genes in pham
- No Manual Annotations of this start.
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Lilbit_24 (S),

Summary by clusters:

There is one cluster represented in this pham: S

Info for manual annotations of cluster S:

•Start number 3 was manually annotated 1 time for cluster S.

•Start number 4 was manually annotated 2 times for cluster S.

•Start number 5 was manually annotated 13 times for cluster S.

Gene Information:

Gene: Beelzebub_27 Start: 7110, Stop: 6847, Start Num: 3 Candidate Starts for Beelzebub_27: (1, 7176), (2, 7155), (Start: 3 @7110 has 1 MA's), (Start: 4 @7089 has 2 MA's), (Start: 5 @7080 has 13 MA's), (6, 7047), (7, 7014), (8, 6921), (9, 6864),

Gene: Blackbeetle_24 Start: 6413, Stop: 6180, Start Num: 5 Candidate Starts for Blackbeetle_24: (1, 6509), (2, 6488), (Start: 3 @6443 has 1 MA's), (Start: 4 @6422 has 2 MA's), (Start: 5 @6413 has 13 MA's), (6, 6380), (7, 6347), (8, 6254), (9, 6197),

Gene: Caprice_20 Start: 5674, Stop: 5411, Start Num: 3 Candidate Starts for Caprice_20: (1, 5740), (2, 5719), (Start: 3 @5674 has 1 MA's), (Start: 4 @5653 has 2 MA's), (Start: 5 @5644 has 13 MA's), (6, 5611), (7, 5578), (8, 5485), (9, 5428),

Gene: Clarkson_24 Start: 6781, Stop: 6548, Start Num: 5 Candidate Starts for Clarkson_24: (1, 6877), (2, 6856), (Start: 3 @6811 has 1 MA's), (Start: 4 @6790 has 2 MA's), (Start: 5 @6781 has 13 MA's), (6, 6748), (7, 6715), (8, 6622), (9, 6565),

Gene: Corazon_22 Start: 6734, Stop: 6501, Start Num: 5 Candidate Starts for Corazon_22:

(1, 6830), (2, 6809), (Start: 3 @6764 has 1 MA's), (Start: 4 @6743 has 2 MA's), (Start: 5 @6734 has 13 MA's), (6, 6701), (7, 6668), (8, 6575), (9, 6518), Gene: Gattaca_23 Start: 6311, Stop: 6069, Start Num: 4 Candidate Starts for Gattaca_23: (1, 6398), (2, 6377), (Start: 3 @6332 has 1 MA's), (Start: 4 @6311 has 2 MA's), (Start: 5 @6302 has 13 MA's), (6, 6269), (7, 6236), (8, 6143), (9, 6086), Gene: Huphlepuff_25 Start: 6586, Stop: 6353, Start Num: 5 Candidate Starts for Huphlepuff 25: (1, 6682), (2, 6661), (Start: 3 @6616 has 1 MA's), (Start: 4 @6595 has 2 MA's), (Start: 5 @6586 has 13 MA's), (6, 6553), (7, 6520), (8, 6427), (9, 6370), Gene: JoieB 24 Start: 6805, Stop: 6572, Start Num: 5 Candidate Starts for JoieB_24: (1, 6901), (2, 6880), (Start: 3 @6835 has 1 MA's), (Start: 4 @6814 has 2 MA's), (Start: 5 @6805 has 13 MA's), (6, 6772), (7, 6739), (8, 6646), (9, 6589), Gene: Lilbit 24 Start: 6716, Stop: 6549, Start Num: 7 Candidate Starts for Lilbit_24: (1, 6878), (2, 6857), (Start: 3 @6812 has 1 MA's), (Start: 4 @6791 has 2 MA's), (Start: 5 @6782 has 13 MA's), (6, 6749), (7, 6716), (8, 6623), (9, 6566), Gene: LittleLaf_23 Start: 6511, Stop: 6278, Start Num: 5 Candidate Starts for LittleLaf_23: (1, 6607), (2, 6586), (Start: 3 @6541 has 1 MA's), (Start: 4 @6520 has 2 MA's), (Start: 5 @6511 has 13 MA's), (6, 6478), (7, 6445), (8, 6352), (9, 6295), Gene: Marvin_22 Start: 6781, Stop: 6548, Start Num: 5 Candidate Starts for Marvin 22: (1, 6877), (2, 6856), (Start: 3 @6811 has 1 MA's), (Start: 4 @6790 has 2 MA's), (Start: 5 @6781 has 13 MA's), (6, 6748), (7, 6715), (8, 6622), (9, 6565), Gene: MosMoris 22 Start: 6311, Stop: 6069, Start Num: 4 Candidate Starts for MosMoris 22: (1, 6398), (2, 6377), (Start: 3 @6332 has 1 MA's), (Start: 4 @6311 has 2 MA's), (Start: 5 @6302 has 13 MA's), (6, 6269), (7, 6236), (8, 6143), (9, 6086), Gene: Poise 24 Start: 6413, Stop: 6180, Start Num: 5 Candidate Starts for Poise 24: (1, 6509), (2, 6488), (Start: 3 @6443 has 1 MA's), (Start: 4 @6422 has 2 MA's), (Start: 5 @6413 has 13 MA's), (6, 6380), (7, 6347), (8, 6254), (9, 6197), Gene: Pringar 23 Start: 6411, Stop: 6178, Start Num: 5 Candidate Starts for Pringar 23: (1, 6507), (2, 6486), (Start: 3 @6441 has 1 MA's), (Start: 4 @6420 has 2 MA's), (Start: 5 @6411 has 13 MA's), (6, 6378), (7, 6345), (8, 6252), (9, 6195), Gene: Raela_24 Start: 6968, Stop: 6735, Start Num: 5 Candidate Starts for Raela 24: (1, 7064), (2, 7043), (Start: 3 @6998 has 1 MA's), (Start: 4 @6977 has 2 MA's), (Start: 5 @6968 has 13 MA's), (6, 6935), (7, 6902), (8, 6809), (9, 6752),

Gene: RedRaider77_24 Start: 6552, Stop: 6319, Start Num: 5 Candidate Starts for RedRaider77_24: (2, 6627), (Start: 3 @6582 has 1 MA's), (Start: 4 @6561 has 2 MA's), (Start: 5 @6552 has 13 MA's), (6, 6519), (7, 6486), (8, 6393), (9, 6336),

Gene: Tesla_23 Start: 6404, Stop: 6171, Start Num: 5 Candidate Starts for Tesla_23: (1, 6500), (2, 6479), (Start: 3 @6434 has 1 MA's), (Start: 4 @6413 has 2 MA's), (Start: 5 @6404 has 13 MA's), (6, 6371), (7, 6338), (8, 6245), (9, 6188),

Gene: VasuNzinga_22 Start: 5988, Stop: 5755, Start Num: 5 Candidate Starts for VasuNzinga_22: (1, 6084), (2, 6063), (Start: 3 @6018 has 1 MA's), (Start: 4 @5997 has 2 MA's), (Start: 5 @5988 has 13 MA's), (6, 5955), (7, 5922), (8, 5829), (9, 5772),